



## Amy J. Clarke

### Current Position

- Scientist, Materials Science and Technology Division, Materials Technology – Metallurgy (MST-6), Los Alamos National Laboratory (LANL), 2010-present

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- **Background**

- Postdoctoral Research Associate, MST-6, LANL, 2009-2010
- Senior Engineer – Development/Research, Product Development Center of Excellence, Advanced Materials Technology, Caterpillar Inc., Mossville, IL, 2008-2009
- G.T. Seaborg Institute for Transactinium Science Postdoctoral Fellow, MST-6, LANL, 2006-2008
- Ph.D., Metallurgical and Materials Engineering, Colorado School of Mines, 2006
- M.S., Metallurgical and Materials Engineering, Colorado School of Mines, 2002
- B.S., Metallurgical and Materials Engineering, Michigan Technological University, 2000

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### Honors

- National Academy of Sciences 26th Annual Kavli Frontiers of Science Symposium, November 2014
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- Michigan Technological University (MTU) Presidential Council of Alumnae, 2014
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- MTU Alumni Association's Outstanding Young Alumni Award, 2013
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- The Minerals, Metals & Materials Society (TMS)/Federation of European Materials Societies (FEMS) Young Leader International Scholar, 2013
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- Presidential Early Career Award for Scientists and Engineers (PECASE), 2012
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U.S. Department of Energy (DOE) Office of Basic Energy Sciences Early Career Research Program Award, 2012-2017

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TMS/Japan Institute of Metals (JIM) Young Leader International Scholar, 2010

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TMS Young Leader Professional Development Award, 2008

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Willy Korf Award for Young Excellence, 2007

### **Activities**

- Association for Iron and Steel Technology (AIST) Board of Directors, 2014-present

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AIST Metallurgy - Processing, Products & Applications Technology Committee Chair, 2012-2013

- The Minerals, Metals & Materials Society (TMS) Board of Directors, 2015-present
- TMS Phase Transformations Committee Chair, 2012-2014

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Editorial Board Member for Scientific Reports, hosted on nature.com, 2014-present

- Key Reader for *Metallurgical and Materials Transactions A*, 2010-present

### **Interests**

*In situ* analyses of materials using x-rays, neutrons, and protons at national user facilities; the study, prediction, and control of liquid-solid and solid-state phase transformations and microstructural evolution; microstructural and property development associated with processing variations; and microstructural characterization of nonferrous and ferrous alloys.

### **Goals**

One of my main research interests is making, measuring, and modeling metals during solidification, which includes x-ray and proton imaging of

solidification dynamics from the microscopic to the macroscopic scale at Argonne National Laboratory's Advanced Photon Source and Los Alamos National Laboratory's Proton Radiography (pRad) Facility. As an APS user, I am always interested in the exciting capabilities that the different beamlines afford for multi-scale and multi-modal studies, especially for materials. My goals would be to communicate what capabilities are available at the different beamlines to users and the broader scientific community and to help users pursue complementary techniques